

Superseded

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Subject	Puerto Rico Landfill Initiative ***Enforcement Confidential*** *** For Internal Use Only*** ***Do Not Release***	Location	Street Address: City: State: PR Zip Code:
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Issue
<p>The majority of Puerto Rico's landfills are past or near capacity, are out of compliance with operating criteria, and may present an imminent and substantial threat to human health and the environment.</p> <p>EPA's overall compliance strategy comprises four elements: 1) closure of open dumps (long-term, non-complying landfills), 2) implementing recycling, 3) greenhouse gas reductions via landfill gas collection, control, & energy recovery and 4) improving operations in existing landfills.</p>

Current Status

Regulatory Changes

In February 2010, EQB transmitted to EPA draft proposed revisions to its existing solid waste regulations per our recommendations. EPA has reviewed these proposed revisions for consistency with the federal requirements and found that only minor additional modifications are necessary for federal consistency. A letter requesting that EQB adopt the proposed revisions was sent in January 2011. As of 10/31/13, the changes have not been officially adopted (through promulgation). In recent discussions between CASD staff and EQB, EQB indicated that it was reviewing the regulation issue again to determine the next steps, which should include promulgating the necessary changes.

EPA Case Pipeline:

Cases with Orders in Place

Vega Baja Landfill:

The Vega Baja Landfill is an unlined municipal landfill located in/adjacent to wetlands, and is located on PR Land Authority property. A September 2012 AOC, replacing the original 2007 AOC, naming the Municipality of Vega Baja, Owner, and La Vega Landfill & Resources, Inc., Operator, as Respondents, requires operating improvements, including slope stabilization, cessation of waste acceptance, phased closure of the existing landfill cell, landfill gas collection and control, acceptance of waste from the Municipality of Florida, construction of a new fully compliant new cell, and a comprehensive recycling program in the Municipality of Vega Baja. A Unilateral Order was issued to the PR Land Authority in January 2013, and the Land Authority is cooperating with the terms.

Vega Baja is constructing a new, lined West Cell so that it can cease receiving waste in the old landfill and proceed with its closure. The new cell is part of a 50 acre landfill site that previously received Planning Board approval, so new environmental statements are not required. The previous EQB administration Resolution (#7-11165) prohibiting lateral expansion to help closure has been waived in this case (the project began well before issuance of the Resolution). As all the conditions previously raised by EQB had been met, EQB authorized the West cell development to proceed, and on May 31, 2013, issued a letter memorializing their decision. On June 7, 2013, all Respondents requested a six month extension to the July 1, 2013, waste disposal cessation date to allow for completion of the West Cell. On July 1, 2013, EPA granted an extension.

Toa Baja Landfill:

The Toa Baja Landfill is a large, unlined municipal landfill, located in karst, with nearby residential communities. The landfill is partially located on GSA (former Navy Base) property. The Municipality of Toa Baja, Owner, and Land-Tech, Operator, are the Respondents in the landfill closure Consent Order and 2012 Amendment. The PR Land Authority, as past owner, is a Respondent under a 2007 Unilateral Order.

A September 2012 amended AOC requires cessation of waste by September 30, 2014, landfill gas collection and control, construction of a new fully compliant, lined new cell (currently under construction), and a comprehensive recycling program in the Municipality of Toa Baja.

Florida Landfill:

The Florida Landfill is a small, poorly designed and operated, unlined municipal landfill located in karst, with nearby drinking water wells. The Municipality of Florida, Owner, and Waste Disposal Management Inc., Operator, are the Respondents in separate Orders for landfill closure. The compliance schedule was stayed when the Municipality invoked dispute resolution based on inability to pay issues. Cessation of waste receipt and implementation of closure at the Florida Landfill was deferred until resolution of the situation at the Vega Baja Landfill, which is prepared to accept Florida's waste at below market rate.

An amended AOC issued September 2013 establishes a new compliance schedule and requires phased closure and waste transfer, as well as a comprehensive recycling program.

Juncos Landfill:

The Juncos Landfill is a moderately large, municipally owned and operated, unlined open dump with significant, long term non-compliance issues. The Municipality of Juncos, Owner and Operator, is the Respondent in a September 2012 landfill closure AOC requiring cessation of waste by December 31, 2014, landfill gas collection and control, gas to energy, photovoltaics, construction of a new fully compliant, lined expansion cell, and a comprehensive recycling program in the Municipality of Juncos.

Cases Under or Soon to be Under Negotiation

Judicial (note the recently signed Confidentiality agreement between EPA and EQB does not cover judicial cases)

Arecibo Landfill:

The Arecibo Landfill borders the Caño Tiburones, an environmentally sensitive wetland and natural reserve. CAA injunctive relief requires a landfill gas collection and control system. RCRA injunctive relief sought includes: slope stabilization; flood protection; stormwater run-on/off controls; leachate controls; halting wetland encroachment; removal of solid waste (e.g., junked autos) from wetlands; site security; pathogen control; financial assurance for closure; proper closure when capacity is reached, and a comprehensive municipal recycling program.

The case was referred to DOJ in June 2009. In March 2013 DOJ informed EPA that the Operator and Mayor have signed the CD. EPA returned the CD to DOJ in May 2013, requesting a more comprehensive recycling program as part of the settlement. In a July 2013 conference call, all three Defendants accepted, in principle, the revised EPA recycling language incorporating the RA's input. However, the Municipality says it has insufficient funds to meet the additional, upfront costs of the revised recycling program. DOJ has again circulated revised tolling agreements for signature to extend the period to negotiate. Despite CD delays, the landfill's gas collection and gas-to-energy systems are operational.

Santa Isabel Landfill:

The Santa Isabel Landfill is a small, municipally owned and operated, unlined open dump with long term non-compliance issues. The Municipality of Santa Isabel, Owner and Operator, and two past operators were Respondents in the original 2007 landfill closure Consent Order. A September 2011 AOC, naming the municipality of Santa Isabel as Respondent, replaced the 2007 AOC and added comprehensive recycling provisions. The 2011 AOC required closure of the Landfill in three annual phases, beginning in December 2011. The first two closure phases were completed in December 2011 and December 2012. The landfill ceased waste acceptance in October 2013. Issues regarding the Santa Isabel closure plan were identified during an April 2013 EPA inspection. A revised closure plan addressing these issues, as well as a recycling plan, is overdue. The case was referred to DOJ in June 2012 for noncompliance with the 2011 AOC.

Administrative

Moca Landfill:

The Moca Landfill is a sprawling, municipally owned and operated, unlined open dump, in karst, with significant, long term non-compliance and endangered species issues. The Municipality of Moca, Owner and past Operator, and the recently contracted current Operator are the Respondents in a draft Order sent to Respondents in May 2013. Negotiations have started and are waiting for some technical work (such as a comprehensive survey of the landfill) to be completed. Respondents have agreed to restrict waste disposal and related activities pending a formal agreement. Some initial comments from one Respondent to the draft Order have been received and are under review. The Order requires closure of the landfill and implementation of operational controls on landfill gas, storm water, and leachate, as well as a comprehensive recycling program.

Lajas Landfill:

The Lajas Landfill is a small, municipally owned and operated, unlined open dump with persistent, long term non-compliance issues. The Municipality of Lajas is the Respondents in a draft Order sent to Respondent in June 2013. Negotiations are ongoing. Comments to the draft Order have been received and are under review. The proposed Order would require closure of the landfill and implementation of

operational controls on landfill gas, storm water, and leachate, as well as a comprehensive recycling program and will likely include provisions for a new, lined cell.

Interest from Elected Officials

Concerns were expressed to then Resident Commissioner (subsequently Governor) Fortuno by former EPA Regional Administrator Steinberg, and in October 2009 Administrator Jackson met with Governor Fortuno and EQB Chairman Nieves to reiterate these concerns.

Options & Recommendations

1. Encourage the Governor to provide ongoing funding (e.g., through dispersion of SWMA Operation Compliance funds) to help the municipalities perform environmentally safe landfill closure.
2. Encourage the Governor to facilitate the Senate dispersion of similar, previously promised closure funds to the municipalities;
3. Encourage EQB and SWMA to develop and implement a new island-wide solid waste plan;
4. Request that EQB adopt revisions to its solid waste regulations, as it had previously agreed upon with EPA;
5. Encourage SWMA to work with municipalities to develop recycling plans under Puerto Rico law , and
6. Request that EQB staff its programs (including legal) to the levels established in its 1994 program authorization.

Background

The Environmental Quality Board (EQB), responsible for permitting and compliance of landfills in Puerto Rico, remains ineffective in its regulatory and enforcement role. Many of the 29 operating landfills are not permitted, the majority are past or near capacity (62% past capacity), and years of enforcement actions by EQB have not resulted in significant improvements in compliance. EPA has inspected operating landfills and found pervasive noncompliance. Few of the landfills have liners or leachate controls, and several are located in karst terrain, exacerbating the risk of ground water contamination.

EQB substantively modified its solid waste management regulations in 1997 without notifying EPA as required. EPA performed a comparison of the revised regulations against the 1993 regulations upon which Puerto Rico's program approval was based. Region 2 expressed its concerns about the regulatory changes and the potential jeopardy of Puerto Rico's program approval status to EQB and the Puerto Rico Governor's office numerous times since 2006.

In addition, EQB has eliminated or left open all central solid waste compliance and permitting staff positions. In 2000, EQB employed 14 central solid waste compliance and permitting staff, by 2005, it had been reduced to 5 (with expanded responsibilities). In 2010, staffing was reduced to 1. By 2012, EQB employed no central solid waste compliance and permitting staff.

The Puerto Rico Solid Waste Management Authority (SWMA), responsible for planning and infrastructure, has been severely challenged in addressing the mounting capacity, recycling, and compliance issues. Its 2007 Dynamic Itinerary for Infrastructure Projects (DIIP) laid out three management scenarios, none of which has been implemented.

CAA Issues

In addition, some of Puerto Rico's landfills have not complied with the Puerto Rico State Implementation Plan for MSW landfills under Part VII and/or CAA regulatory requirement to determine whether their design capacity and Non-Methane Organic Compounds (NMOC) emissions trigger the need for the installation of a gas collection control system (GCCS) and /or an Title V operating permit (however, the CAA regulations do not require a landfill to close to install the equipment required when such triggers are met).

Some of the landfills that have increased their design capacity since their startup are also significantly non-compliant with new source performance standards emission guidelines, and the maximum achievable control technology regulations. However, the lack of submittal of initial design capacity reports and NMOC emission reports along with permits has led to insufficient reporting on design capacity and emissions, rendering EPA unable to determine whether the landfills are required to install certain equipment. There are approximately 12 active and/or closed municipal solid waste landfills that may be subject to federal CAA regulations. A Notice of Violation was issued for the San Juan landfill - one of five landfills identified as potentially high priority violators - for monitoring, reporting and record keeping violations (the Ponce, Arecibo, Toa Baja, and Carolina landfills were also identified as potential high priority violators). The Arecibo landfill was referred to DOJ in 2010 for multiple violations, and the CAA requirements for the Toa Baja landfill are being addressed under the existing RCRA Order as of December 2010. CAA requirements are also addressed under existing RCRA Orders for the Vega Baja and Juncos Landfills. EPA (CEPD) is currently evaluating the Yauco Landfill to determine whether there are any CAA violations.

Recycling Infrastructure

EPA launched the PR Recycling Partnership in 2010 to facilitate waste reduction and recycling in the Commonwealth. The group had its inaugural meeting in April 2010 and has since conducted monthly conference calls. EPA has worked closely with SWMA to improve its solid waste management infrastructure, and continues to offer assistance through technical review/guidance, grants, workshops and conferences cosponsored with SWMA (such as the 2007 Waste to Energy conference and the 2008 Recycling conference). EPA funded the development of the Puerto Rico Materials Exchange Web site - a virtual marketplace that enables users to trade recyclable materials online, and sponsored a training workshop during its launch in April 2009. The goal is to facilitate waste diversion and increase materials

reuse and recycling, promote green jobs and economy, and reduce greenhouse gas emissions. The Web site currently has 124 members with 342 listings. EPA has been performing additional outreach to increase use of this waste diversion tool.

In addition, recently issued new EPA RCRA Consent Orders or amendments to prior Orders issued to municipal landfill owner/operators will require the development and implementation of municipal recycling requirements.

Greenhouse Gas Reductions

Methane (~50% of landfill gas) is a greenhouse gas that contributes to global climate change and is of particular concern because it is 21 times more effective at trapping heat in the atmosphere than carbon dioxide. Landfills are the largest human-related source of methane in the U.S., accounting for 34% of all methane emissions. As a central part of EPA's overall compliance strategy, current and recent landfill Orders have required landfill gas collection and control, either through existing CAA regulations or through RCRA Order-mandated mitigation of environmental risk.

When feasible, RCRA Orders also require landfill gas to energy systems and photovoltaic cap systems to achieve further greenhouse gas reductions. In addition, RCRA Orders require comprehensive municipal recycling programs. Effective recycling programs represent significant reductions in greenhouse gas emissions via reduced life-cycle energy requirements (reflecting the difference between making products with virgin inputs and making a product with recycled raw material inputs).
